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United States
Department of
Agriculture
Soil
Conservation
Service
Boise
Idaho



WATER SUPPLY OUTLOOK FOR IDAHO

in Cooperation with Idaho State Department of Water
Resources, Idaho Soil Conservation Districts, and NOAA,
National Weather Service



May 1, 1984

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Up to 75 percent of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data effecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent as surveyed and marked locations in mountain areas. These measurements are repeated in the same location near the same dates each year. Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Snotel (snow telemetry) networks of automatic snow water equivalent and related data sensing devices, are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. A joint Soil Conservation Service and National Weather Service report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs. This report can be obtained from Soil Conservation Service, National Technical Center, Rm. 510, 511 NW Broadway, Portland, Oregon 97209.

In California, the program is coordinated by the California Department of Water Resources. The Canadian provinces of British Columbia and Alberta have comparable programs.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states.

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	2490 W. 26th Ave., Diamond Hill, Bldg. A, Denver, Colorado 80211
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	Room 443, Federal Building, 10 East Babcock, Bozeman, Montana 59715
Nevada	50 S. Virginia Street, P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	Federal Office Building, 100 East B. Street, Casper, Wyoming 82601

WATER SUPPLY OUTLOOK
FOR
IDAHO
and
Federal-State-Private Cooperative Snow Surveys

Issued by
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Soil Conservation Districts
NOAA-National Weather Service
Idaho Power Company
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Report prepared by
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WATER SUPPLY OUTLOOK for IDAHO



GENERAL STATEMENT FOR MAY 1, 1984

The 1984 water supply outlook is good to excellent throughout central, eastern, and southern Idaho while northern Idaho streamflows will be below normal. May-September seasonal streamflow forecasts range from 71 percent of average on the St. Joe and Spokane River drainages to 268 percent of average for Lake Owyhee net inflow in southeastern Oregon. Inflows to Salmon Falls Creek Reservoir and Oakley Reservoir in southern Idaho are expected to be 222 percent and 241 percent of normal, respectively. These forecasts, coupled with current reservoir storages, indicate that both reservoirs will fill to capacity for the first time since 1921. Carry-over storage in most other reservoirs remains near to well above normal and many reservoirs in southern Idaho are being lowered in anticipation of high volume runoffs.

Snow cover conditions as of May 1 range from a low of 71 percent of average on the Spokane River drainage to a high of 276 percent of average on the Owyhee basin. Snowpack conditions increased significantly on the southern tributaries to the Snake River as a result of below normal temperatures and are well above normal snowfall. Several sites reported increases over 350 percent of normal for the month of April and most stations on the south side of the Snake are now reporting record or near record high snow water contents for May 1.

A series of Pacific storms throughout April kept Idaho cool and wet. Temperatures averaged below normal over the entire state. A brief warm spell in the middle of the month sent readings into the low 80's but a cold front on April 17 lowered temperatures by as much as 25° F.



Precipitation throughout Idaho averaged at or above normal. Heaviest amounts were reported over the southwest and southeast corners of the state where totals were 50 to 75 percent above average.

A gradual warming trend without rain is needed over areas with much above normal snowpack, where rapid or prolonged warming accompanied by heavy rain could produce excessively high peak flows. The area of greatest concern is the extreme southern portion of the state, from the Owyhee Mountains eastward to the Portneuf and Malad River drainages.

VALLEY PRECIPITATION 1/

Division Averages and Departures

In Inches

DRAINAGE DIVISIONS	Winter April 1984		Fall - Winter Nov. 1983 - April 1984	
	Observed	Departure 2/	Observed	Departure 2/
Kootenai, Canada & U.S.	1.80	+ 0.18	13.16	- 1.85
Flathead	2.03	+ 0.39	10.02	- 2.35
Clark Fork	1.70	+ 0.37	8.23	- 1.10
Pend Oreille-Spokane	2.79	+ 0.97	20.26	+ 0.89
Upper Snake	1.41	- 0.38	13.26	+ 1.36
Snake River Plain	1.16	+ 0.17	8.65	+ 2.58
Salmon-Payette-Boise	1.99	+ 0.56	16.97	+ 3.75
Clearwater	2.58	- 0.54	20.59	- 0.41
Owyhee-Malheur	1.18	+ 0.43	10.78	+ 4.36

1/ Preliminary analysis and data by the National Weather Service and Meteorological Service of Canada.

2/ Departure from 15-year (1963-1977) drainage division average.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^d

UPPER COLUMBIA BASINKOOTENAI RIVER

Leona	(at)	5840 5010	75 74	May-Sep May-Jul	-- --	7838 6734
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<u>PEND OREILLE RIVER</u>						
<u>Clark Fork River</u>						
Whitehorse Rapids	(at)	8760 7830	73 73	May-Sep May-Jul	-- --	11930 10710

<u>Pend Oreille Lake</u>						
Inflow		9900 8960	75 76	May-Sep May-Jul	-- --	13140 11860

<u>Priest River</u>						
Priest River 1/	(at)	540	76	May-Sep	--	707

<u>SPOKANE RIVER</u>						
Post Falls 2/	(at)	1410 1340	71 71	May-Sep May-Jul	-- --	1988 1884

<u>St. Joe River</u>						
Calder	(at)	720 675	71 71	May-Sep May-Jul	-- --	1019 950

SNAKE RIVER BASIN

<u>SNAKE RIVER - MAIN STEM</u>						
Moran 3/	(at)	750	85	Apr-Sep	--	880
Palisades Inflow 3/		3330	88	Apr-Sep	--	3793
Heise 4/	(nr)	3280 2750	88 88	May-Sep May-Jul	-- --	3724 3122

Blackfoot 5/	(nr)	4535 3670	91 91	May-Sep May-Jul	-- --	4986 3985
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<u>Henrys Fork</u>						
Ashton 6/	(nr)	580 404	95 95	May-Sep May-Jul	-- --	610 425

Rexburg 7/	(nr)	1320 1000	100 100	May-Sep May-Jul	-- --	1324 1004
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<u>Falls River</u>						
Squirrel	(nr)	344	94	Apr-Jul	--	366

<u>Teton</u>						
South Leigh Creek	(ab)	177 127	103 103	May-Sep May-Jul	-- --	172 123

St. Anthony	(nr)	481 376	114 113	May-Sep May-Jul	-- --	423 332
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<u>Portneuf River</u>						
Topaz	(at)	117 85	162 162	May-Sep May-Jul	-- --	72.3 52.4

<u>Oakley Reservoir</u>						
Inflow		55 47.5	241 240	May-Sep May-Jul	-- --	22.8 19.8

<u>Salmon Falls Creek</u>						
San Jacinto	(nr)	135 125	222 222	May-Sep May-Jul	-- --	60.9 56.2

(c) Assuming normal meteorological conditions.

+1961-1980 period

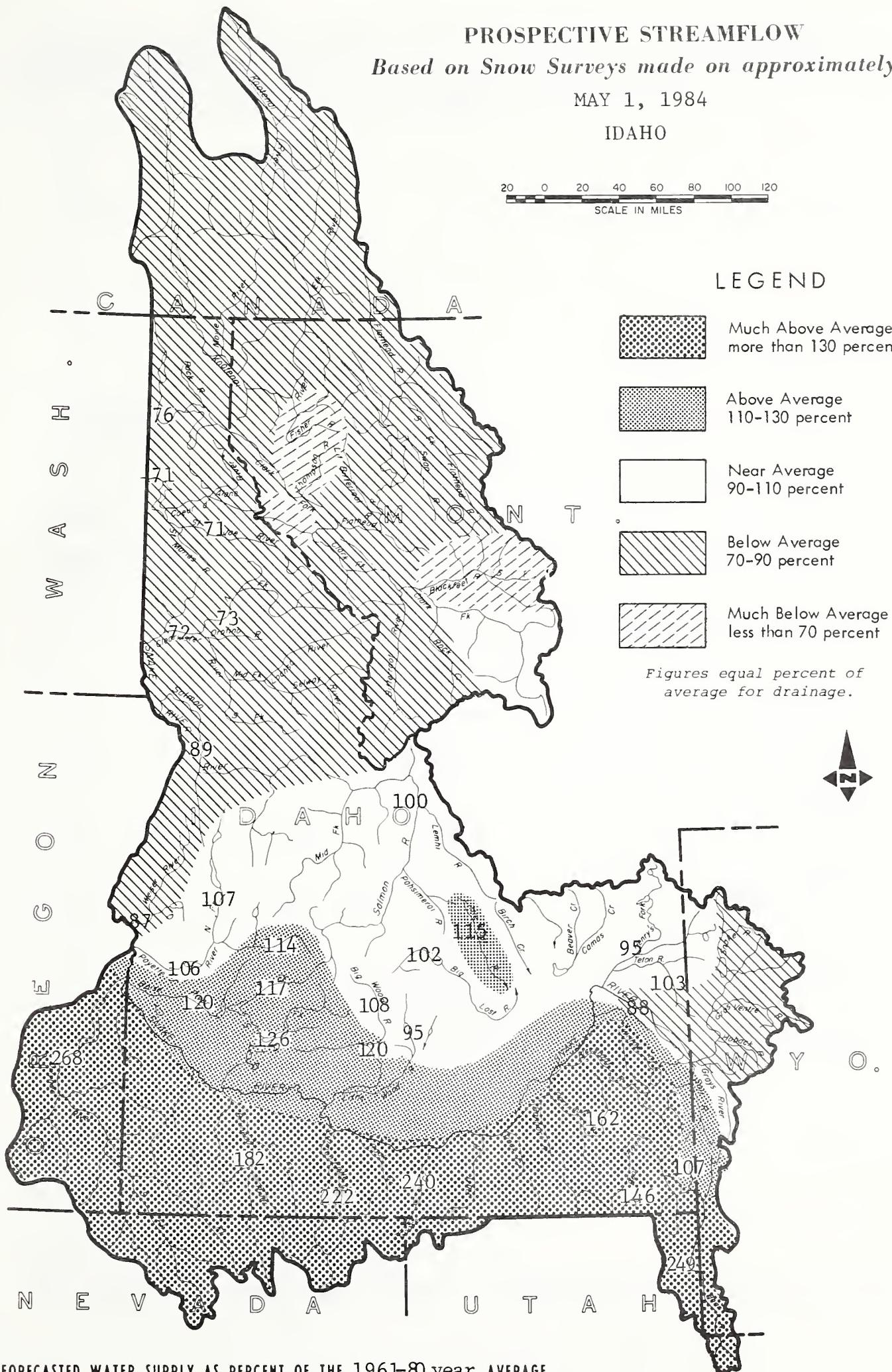
PROSPECTIVE STREAMFLOW
Based on Snow Surveys made on approximately
MAY 1, 1984
IDAHO

20 0 20 40 60 80 100 120
 SCALE IN MILES

LEGEND

	Much Above Average more than 130 percent
	Above Average 110-130 percent
	Near Average 90-110 percent
	Below Average 70-90 percent
	Much Below Average less than 70 percent

Figures equal percent of
average for drainage.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST C Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average +
<u>Bruneau River</u> Hot Springs	(nr)	320 300	182 182	May-Sep May-Jul	-- --
					176 164
<u>Little Lost River</u> Howe	(nr)	43 32	115 116	May-Sep May-Jul	-- --
					37.3 27.6
Wet Creek	(b1)	40.5 32	115 115	May-Sep May-Jul	-- --
					35.2 27.8
<u>Big Lost River</u> Howell Ranch	(at)	205 180 137	102 102 102	May-Sep May-Jul May-Jun	-- -- --
					201 176 134
Mackay 8/	(nr)	175 144 105	102 102 102	May-Sep May-Jul May-Jun	-- -- --
					172 141 103
<u>Big Wood River</u> Bellevue	(nr)	180 166	108 108	May-Sep May-Jul	-- --
					168 154
Magic Reservoir Inflow 9/		250 234	120 120	May-Sep May-Jul	-- --
					209 195
<u>Little Wood River</u> Carey 10/	(nr)	71 64	95 94	May-Sep May-Jul	-- --
					75.1 67.3
<u>Boise River</u> Twin Springs	(nr)	690 620	117 117	May-Sep May-Jul	-- --
					586 531
Boise 11/	(nr)	1500 1360	120 120	May-Sep May-Jul	-- --
					1248 1128
<u>South Fork</u> Anderson Dam 12/	(at)	605 556	126 127	May-Sep May-Jul	-- --
					480 439
<u>Owyhee River</u> Gold Cr., Nv 13/ Owyhee, Nv 13/ Lake Owyhee Net inflow 14/	(nr) (nr)	65 235 574 502	278 275 268 268	Apr-Jul Apr-Jul May-Sep May-Jul	-- -- -- --
					23.4 85.4 214 187
<u>Payette River</u> Horseshoe Bend 15/	(nr)	1600 1460	106 107	May-Sep May-Jul	-- --
					1504 1367
<u>North Fork</u> Cascade 16/	(at)	500 460	107 107	May-Sep May-Jul	-- --
					466 431
Banks 16/	(nr)	630 585	108 108	May-Sep May-Jul	-- --
					581 540
<u>South Fork</u> Lowman	(nr)	507 442	114 114	May-Sep May-Jul	-- --
					444 388
<u>Deadwood Reservoir</u> Inflow		136	108	May-Jul	--
					126

(c) Assuming normal meteorological conditions.

+1961-1980 period

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST ^c	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET	Average ^f
Thousand Acre Feet			Last Year		
<u>Weiser River</u>					
Weiser	(nr)	230	87	May-Jul	--
					263
<u>Salmon River</u>					
Whitebird	(at)	5580	89	May-Sep	--
		4960	89	May-Jul	--
					6248
Salmon	(nr)	1050	100	Apr-Sep	--
		899	100	Apr-Jul	--
					1053
					899
<u>Clearwater</u>					
Orofino	(at)	3120	72	May-Sep	--
					4338
Spalding	(at)	5160	75	May-Sep	--
		4750	74	May-Jul	--
					6854
					6395
<u>North Fork Clearwater</u>					
Dworshak Reservoir		1710	73	May-Sep	--
Inflow		1560	72	May-Jul	--
					2338
					2157
<u>GREAT BASIN</u>					
<u>BEAR RIVER</u>					
Harer	(at)	468	151	Apr-Sep	624
					249
<u>Montpelier Creek</u>					
Montpelier	(nr)	13.7	117	May-Sep	--
					11.7
<u>Cub River</u>					
Preston	(nr)	70	146	May-Sep	--
		63	147	May-Jul	--
					47.8
					42.8

1/ Observed flow corrected for storage in Priest Lake.

2/ Observed flow corrected for storage in Coeur d'Alene Lake.

3/ Corrected for storage in Jackson Lake.

4/ Corrected for storage in Jackson Lake and Palisades.

5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henrys Lake, Grassy Lake and diversions between Heise and Blackfoot.

6/ Corrected for storage in Henrys Lake and Island Park Reservoir.

7/ Corrected for storage in Henrys Lake and Island Park, Grassy Lake and diversions between Ashton and Rexburg.

8/ Observed flow corrected for storage in Mackay Reservoir.

9/ Combined flow Big Wood River nr. Bellevue and Camas Creek near Blaine.

10/ Corrected for storage in Little Wood Reservoir.

11/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak reservoirs.

12/ Corrected for storage in Anderson Ranch Reservoir.

13/ Corrected for storage in Wildhorse Reservoir.

14/ From Bureau of Reclamation records of inflow.

15/ Corrected for storage in Cascade and Deadwood Reservoirs.

16/ Corrected for storage in Cascade Reservoir.

Cooperative forecasts released by Soil Conservation Service and National Weather Service.

(c) Assuming normal meteorological conditions.

+1961-1980 period

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1961- 80 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork - Pend Oreille</u>				
Hungry Horse	3428.0	2221.0	2507.0	1982.0
Flathead	1791.0	789.2	950.8	932.7
Pend Oreille	1155.1	497.7	582.3	505.2
Noxon	334.6	314.9	312.8	250.1
<u>Spokane</u>				
Coeur d'Alene	225.1	230.9	182.3	257.1
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	624.4	498.5	506.3	517.5
Palisades	1200.0	657.4	900.5	682.4
American Falls	1673.0	1603.5	1662.7	1526.3
Island Park	127.0	120.0	122.7	125.5
Grassy Lake	15.2	14.4	13.1	11.0
Brownlee	980.2	751.5	592.0	481.0
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	58.0	43.5	37.9
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	136.4	81.1	76.3
<u>Big Lost</u>				
Mackay	44.2	37.1	25.0	33.5
<u>Big Wood</u>				
Magic	191.5	181.1	168.0	165.2
<u>Little Wood</u>				
Little Wood	30.0	24.1	13.9	25.2
<u>Fish Creek</u>				
Carey Valley	14.4	13.4	13.9	--
<u>Boise</u>				
Anderson Ranch	423.2	276.1	216.7	284.6
Arrowrock	286.6	197.3	143.4	218.4
Lucky Peak	278.2	206.1	178.9	147.5
Lake Lowell (Deer Flat)	169.0	162.2	161.6	153.0
<u>Owyhee</u>				
Owyhee	715.0	632.9	677.4	525.3
<u>Payette</u>				
Cascade	653.2	409.9	384.4	340.5
Deadwood	161.9	125.0	127.0	94.2
<u>Weiser</u>				
Mann Creek	11.1	11.0	9.4	--
<u>Clearwater</u>				
Dworshak	2016.0	1320.1	1176.8	--
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	1111.2	1106.4	1050.1

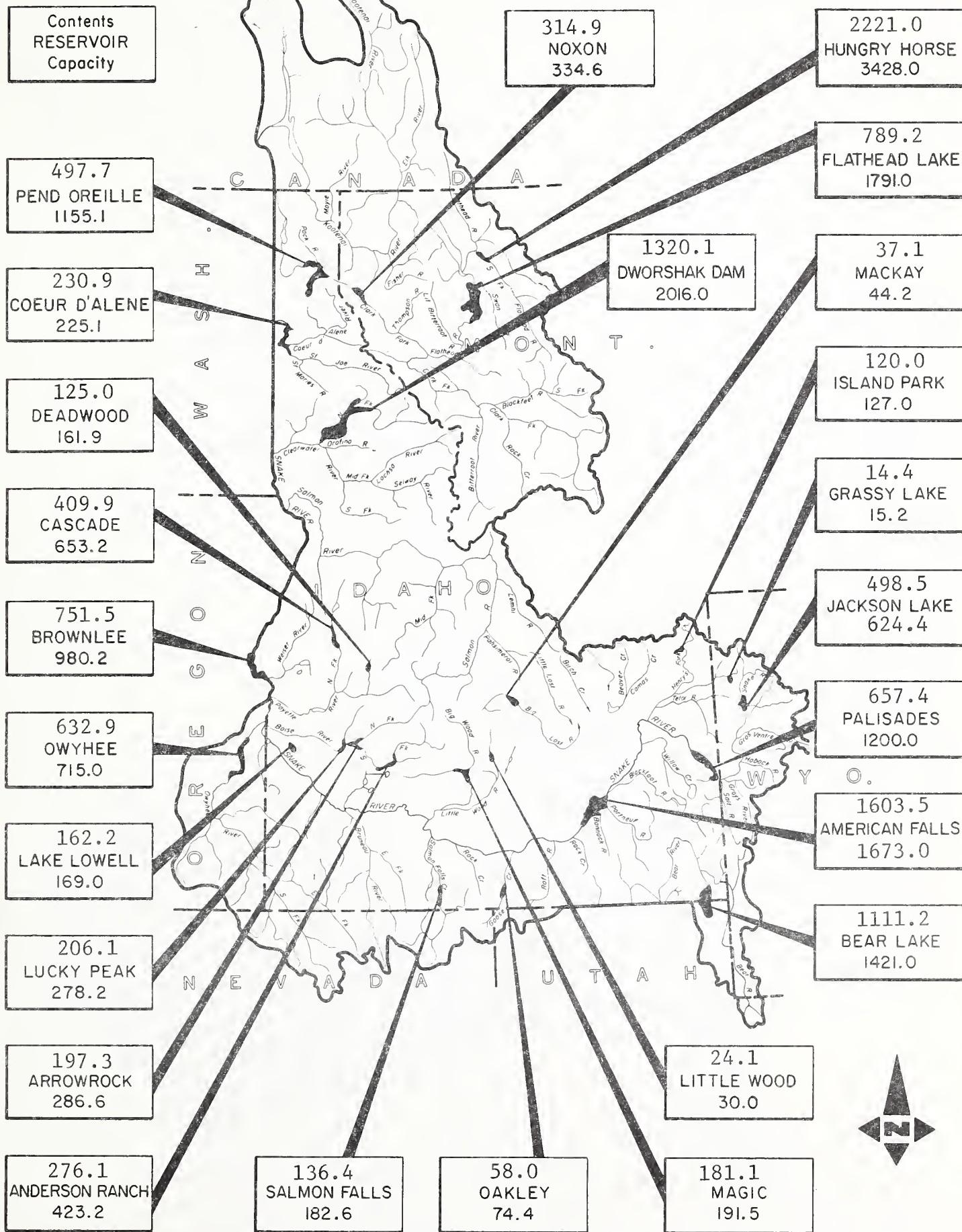
*Period of Record

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

MAY 1, 1984

50 0 50 100 150
SCALE IN MILES

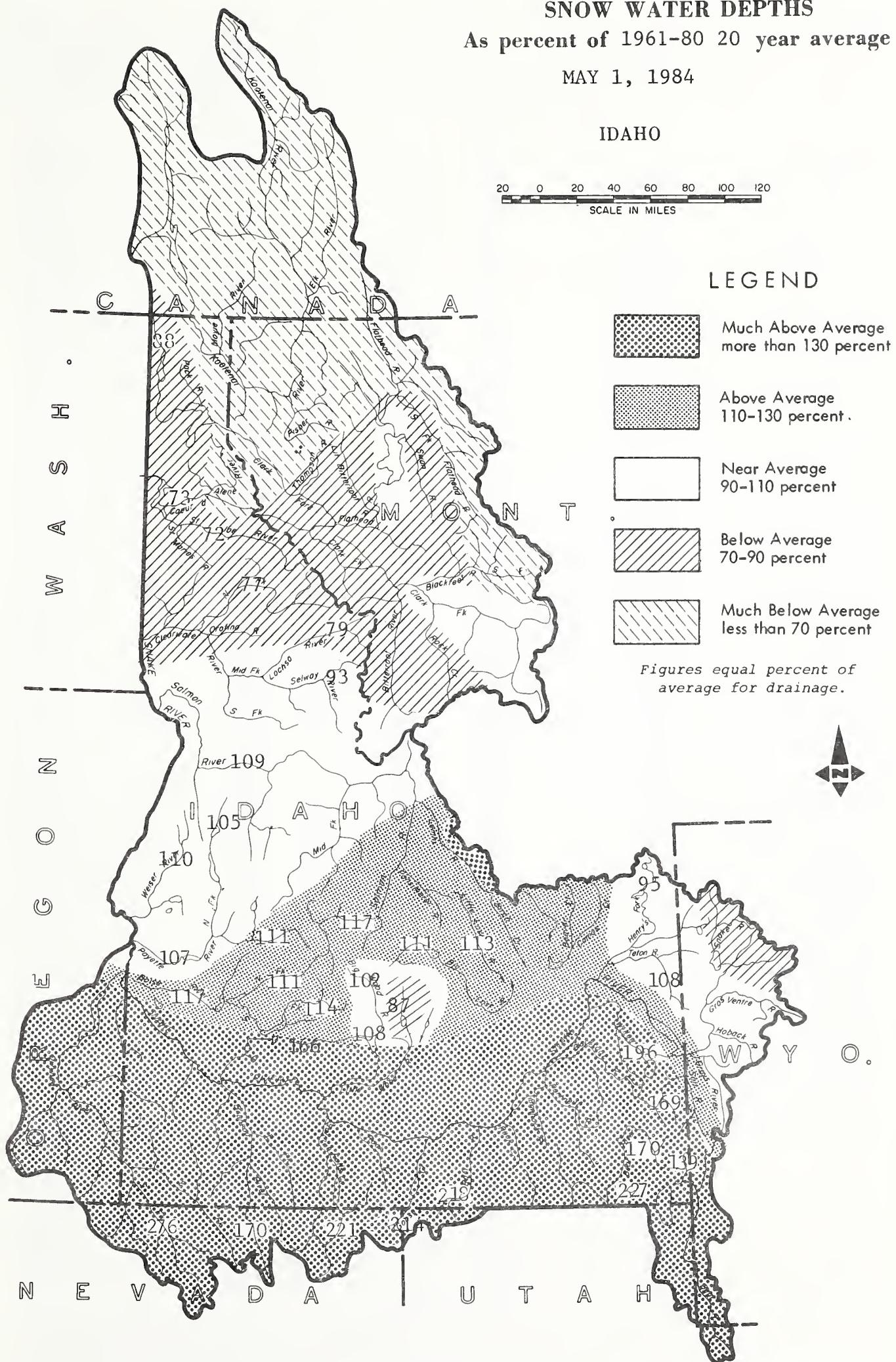


COMPARISON of SNOW COVER

RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF LAST YEAR 1961-80 AVERAGE	
<u>UPPER COLUMBIA RIVER BASIN</u>			
Kootenai River	56	67	62
Pend Oreille River	154	98	81
Clark Fork River	100	105	83
Clark Fork above Blackfoot, Mt	39	118	100
Blackfoot River, Mt	23	110	75
Flathead River, Mt	54	91	79
North Fork Flathead, Mt	10	69	67
Middle Fork Flathead, Mt	11	87	65
South Fork Flathead, Mt	13	101	91
Bitterroot River, Mt	21	112	88
Priest River	4 - 5	65	88
Spokane River	14 - 18	90	71
Coeur d'Alene River	5 - 6	85	73
St. Joe River	8 - 11	91	72
<u>LOWER SNAKE RIVER BASIN</u>			
Clearwater River	22 - 23	105	80
North Fork Clearwater	13 - 14	93	77
Lochsa	5	108	79
Selway	6	143	93
Salmon River	17 - 19	97	109
Salmon Ab. Salmon	5 - 6	92	117
Lemhi River	2	211	159
<u>MIDDLE SNAKE RIVER BASIN - Northside</u>			
Little Lost River	2 - 4	72	113
Big Lost River	5	66	111
Little Wood River	4	46	87
Big Wood River	9 - 10	70	108
Big Wood River Ab. Magic Reservoir	7 - 8	70	102
Camas Creek	2	73	166
Boise River	12 - 15	78	117
Middle Fork Boise	7 - 10	79	111
South Fork Boise	6	77	114
Payette River	13 - 15	89	107
South Fork Payette	5 - 6	79	111
North Fork Payette	8 - 9	96	105
Weiser River	4 - 6	110	110
<u>MIDDLE SNAKE RIVER BASIN - Southside</u>			
Raft River	1	129	218
Goose-Trapper Creeks	2	-	214
Salmon Falls Creek	5 - 8	137	221
Bruneau River	2	138	170
Owyhee River Ab. Owyhee Lake	5	131	276
<u>UPPER SNAKE RIVER BASIN</u>			
Upper Snake Ab. Palisades Reservoir	13	100	99
Snake Ab. Jackson, Wy	2	85	88
Gros Ventre, Wy	3	98	93
Greys River, Wy	2	106	98
Salt River, Wy	4	114	130
Henrys Fork River	10	82	95
Teton River	9 - 10	92	108
Willow Creek	7 - 9	87	196
Blackfoot River	2 - 3	82	169
<u>GREAT BASIN</u>			
Bear River	6	104	119
Montpelier Creek	5 - 6	111	139
Mink Creek	1 - 2	111	170
Cub River	2 - 3	266	227

SNOW WATER DEPTHS
As percent of 1961-80 20 year average
MAY 1, 1984

IDAHO



SNOW

SNOW COURSE NAME & DRAINAGE	Elevation	THIS YEAR			PAST RECORD		
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average	
Above Burke	Coeur d'Alene	4100	4/30	25	9.8	13.4	19.9*
Afton Ranger Sta.	(Wy) Salt River	6240	4/27	0	0.0	0.0	0.0
Aspen Grove	Willow	6500	4/30	12.5e	--	7.3*	
Atlanta Summit	Boise	7600	5/4	102	39.3	49.0	35.3
Atlanta Townsite	Boise	5370	5/4	0	0.0	7.2	--
Bad Bear	Boise	4940	5/1	13	5.8	6.0	5.1
Badger Gulch	Trapper	6660	5/2	51	22.7	--	9.6*
Banner Summit	Payette	7040	5/4	74	29.5	35.3	--
Beagle Springs	(Mt) Beaverhead	8850	4/28	44	13.2	11.5	8.0
Bear Basin	Little Salmon	5350	4/27	52	20.9	22.8	--
Bear Canyon	Big Lost	7900	5/7	46	16.6	27.0	17.5*
Bear Mountain	Clark Fork	5400	4/25	93	42.6	69.4	64.2*
Benton Meadow	Priest	2370	4/27	0	0.0	0.0	0.0*
Benton Spring	Priest	4920	4/27	34	12.8	19.5	15.6
Big Creek Summit	Salmon	6580	4/27	90	37.1	46.7	37.3
Big Springs	Henry's Fork	6400	5/1	41	17.0	16.8	17.0*
Birch Creek	Willow	6800	4/30	24	8.4	6.2	7.4*
Black Bear	(Mt) Madison	7950	5/1	98	40.4	48.5	44.8
Bloody Dick	(Mt) Beaverhead	7600	4/26	45	13.0	13.4	14.1
Blue Ridge	Blackfoot	6780	4/30	61	23.4	24.3	9.3*
Bogus Basin	Payette	6340	5/1	80	34.5	39.8	23.3
Bogus Basin Road	Boise	5540	5/1	0	0.0	0.0	0.3*
Bone	Willow	6200	4/30	7	1.9	0.0	1.1*
Boulder Creek	Weiser	5440	5/1	50	19.2	20.4	15.1*
Breezy Saddle	Clearwater	5010	4/30	51	17.6	21.8	--
Brockman Station	Willow	6430	4/30	21	8.4	7.1	6.5*
Brundage Mountain	Little Salmon	7560	4/29	117	49.5	62.0	49.7*
Bruno Creek	Salmon	7920	5/2	48	17.3	20.4	--
Bryan Flat	(Wy) Hoback	6420	4/24	10	3.3	3.8	2.7
Buck Meadows	Selway	5650	4/27	82	26.9	18.6	27.9*
Cayuse Airstrip	Clearwater	3500	4/27	0	0.0	0.0	0.7*
CCC Camp	(Wy) Salt	7000	4/26	37	13.2	11.8	9.0
Cedar Creek	Cedar	6820	4/30	49	20.6	--	3.3*
Cold Springs	Portneuf	7000	4/29	70	26.8	--	--
Conie Ridge	Hayden	3900	5/1	0	0.0	--	--
Coolwater Mountain	Lochsa	6030	4/27	109	38.0	32.7	33.6*
Copper Basin	Big Lost	7640	5/7	26	10.0	14.9	7.5*
Copper Ridge	Coeur d'Alene	4820	4/30	47	20.9	20.5	23.5
Corner Creek	Hayden	3150	5/1	0	0.0	--	--
Couch Summit	Boise	6840	4/28	48	18.5	26.7	13.9*
Cozy Cove	Deadwood	5380	5/4	19	8.1	12.7	8.4*
Crater Meadows	Clearwater	5960	4/27	101	40.3	35.6	46.2*
Crawford Ranger Sta.	Payette	4860	4/27	0	0.0	0.0	0.3*
Crooked Fork	Lochsa	3610	5/1	0	0.0	0.0	2.9*
Cub River Ranger Sta.	Cub	5450	4/27	14	5.1	0.0	0.1*
Dad Creek Lake	(Mt) Beaverhead	8400	4/28	87	19.8	16.2	17.4
Darby Canyon	(Wy) Teton	8250	4/30	73	28.1	28.3	23.2*
Darkhorse Lake	(Mt) Big Hole	8600	4/28	83	33.4	26.6	30.0
Deadline	Salmon Falls	7400	4/30	83	36.0	29.9	20.0*
Deadline South	Salmon Falls	7450	4/30	122	51.0	37.4	21.4*
Deadwood Airstrip	Deadwood	5360	5/1	9.4e	13.3	6.9*	
Deadwood Summit	Deadwood	6860	5/4	98	42.8	58.7	45.5*
Dollarhide Summit	Big Wood	8420	5/7	73	27.2	38.2	24.3*
East Rim Divide	(Wy) Hoback	7930	4/26	31	9.1	10.4	11.8
Elk Butte	Clearwater	5550	4/30	71	26.9	23.8	31.7*
Emigrant Summit	Bear	7390	4/30	81	33.4	30.1	23.6
Emigration Canyon	Bear	6500	4/30	22	9.2	--	--
Fish Lake Airstrip	Lochsa	5650	4/27	80	28.0	29.0	40.0*
Fishpole Lake	Big Lost	9300	5/7	80	29.6	40.7	23.1*
Forty-nine Meadows	Clearwater	4830	4/30	46	16.5	20.6	25.0
Fourth of July Summit	Coeur d'Alene	3200	5/1	0	0.0	--	0.6*
Franklin Basin	Cub	8040	4/27	79	33.6	--	20.7*
Freds Mountain	(Wy) Teton	8150	4/30	28.1e	29.7	25.4*	
Galena	Big Wood	7440	5/2	40	14.7	23.1	14.5
Galena Summit	Big Wood	8780	5/2	73	26.0	35.2	25.6
Garfield Ranger Sta.	Little Wood	6560	5/7	0	0.0	10.9	2.1*
Gibbons Pass	(Mt) Bitterroot	7100	4/26	65	24.7	25.0	24.0
Giveout	Montpelier	6860	4/30	30	13.0	11.1	7.4
Goat Creek	Salmon Falls	8880	4/30	96	36.0	26.8	20.2*
Goat Lake	Clearwater	6500	4/27	106	37.7	39.6	50.2*
Gold Stone	(Mt) Beaverhead	8100	4/26	58	17.6	18.4	19.6
Graham Guard Sta.	Boise	5690	5/4	21	8.8	14.1	5.7*
Graham Ranch	Big Wood	6270	5/2	30	11.2	17.5	8.7*

(A) Aerial observation, water content estimated

(b) 1961-80, 20 year average

(e) Snow course data estimated from automated Snotel readings

(*) Estimated 1961-1980 20 year average

1/ Data readings as reported by automated Snotel system

SNOW

SNOW COURSE		Elevation	THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average
Granite Peak	St. Joe	6000	4/30	85	29.3	37.0	--
Grassy Lake	(Wy) Henrys Fork	7265	4/30	80	33.6	37.8	35.4
Greys Boundary	(Wy) Greys	5720	4/27	18	6.0	4.4	3.2
Gros Ventre Summit	(Wy) Gros Ventre	8750	5/2	40	12.6	10.5	11.8
Grover Park Divide	(Wy) Salt	7000	4/26	38	14.0	10.6	9.6
Heart Lake Trail	(Mt) Clark Fork	4800	4/29	27	11.3	9.0	18.4
Hemlock Butte	Clearwater	5810	4/27	112	41.6	37.8	50.1
Hilts Creek	Little Lost	8000	4/30	41	11.0	18.4	--
Hoodoo Basin	(Mt) Clark Fork	6000	4/29	98	42.8	45.7	54.5
Hoodoo Creek	(Mt) Clark Fork	5900	4/29	89	39.4	41.4	50.7
Howell Canyon	Marsh Creek	7980	5/1	114	48.4	37.4	22.2
Humboldt Gulch	Coeur d'Alene	4250	4/30	11	4.6	11.0	--
Hyndman Creek	Big Wood	7440	5/7	28	10.0	19.0	--
Idaho City Townsite	Boise	4000	5/1	0	0.0	0.0	--
Indian Meadows	Teton	8240	4/30	101	43.2	48.2	38.8*
Island Park	Henrys Fork	6290	5/1	27	11.4	14.4	11.0*
Jackpine Creek	(Wy) Teton	7350	4/30	56	23.2	25.0	21.7
Jacks Peak	(Nv) Owyhee	8420	5/1	125e	48.8e	39.7	26.8
Jackson Peak	Boise	7070	5/4	83	33.7	39.4	31.3*
Kruze Meadow	Clearwater	4780	4/30	25	7.8	--	--
Lake Fork	Payette	5290	4/28	40	15.4	12.9	13.1*
Lakeview Canyon	(Mt) Beaverhead	6930	4/26	34	9.6	19.4	12.6
Lakeview Ridge	(Mt) Beaverhead	7400	4/26	31	9.2	17.3	10.5
Langford Flat Creek	Salmon Falls	5980	4/30	16	5.8	--	--
Laurel Draw	(Nv) Owyhee	6700	5/1	34e	13.6e	8.6	1.3
Lava Creek	Willow	7350	4/30	46	17.2	17.6	9.0*
Lemhi Pass	(Mt) Beaverhead	7480	4/28	40	13.2	5.0	7.4
Lemhi Ridge	(Mt) Beaverhead	8100	4/28	47	15.5	8.6	10.6
Lewis Lake Divide	(Wy) Snake	7850	4/30	82	36.4	44.6	44.1
Little Beaver	Montpelier	6970	4/30	39	16.7	14.0	10.7*
Lolo Pass	Lochsa	5240	5/1	44	18.6	15.8	30.0*
Lookout	Coeur d'Alene	5140	4/30	55	23.8	30.6	33.7
Lost Horse	(Mt) Bitterroot	5940	4/27	72	29.6	26.8	34.9
Lost Lake	Clearwater	6110	4/30	118	46.2	49.4	59.1*
Lost-Wood Divide	Big Lost	7900	5/7	54	20.6	30.0	22.6*
Lower Home Canyon	Montpelier	7640	4/30	41	14.0	12.6	11.9*
Lower Sands Creek	Coeur d'Alene	3120	4/30	33	14.2	13.1	17.0
Madison Plateau	(Mt) Madison	7750	5/1	58	21.8	27.2	23.6
Magic Mountain	Rock Creek	6880	4/30	85	35.0	22.1	17.5*
Mascot Mine	Big Wood	7780	5/7	38	13.1	22.4	14.8*
McRenolds Reservoir	Teton	6720	4/30	49	19.8	19.0	16.6*
Mill Creek Summit	Salmon	8800	5/1	73	25.5	28.6	24.4*
Montpelier Creek	Montpelier	6540	5/1	5.2e	4.2	1.1*	
Moonshine	Little Lost	7440	4/27	35	9.5	11.0	9.3*
Moores Creek Summit	Boise	6100	5/1	83	37.2	44.0	31.4
Moose Creek	North Fork Salmon	6200	4/27	52	17.8	14.6	14.6*
Morgan Creek	Salmon	7600	5/1	49	16.7	14.4	12.7*
Mountain Meadows	Selway	6360	4/27	72	25.0	13.1	24.0
Mud Creek	Willow	7100	4/30	77	28.9	29.1	9.5*
Muldoon	Little Wood	6320	5/7	0	0.0	3.3	0.4*
Nez Perce Pass	(Mt) Bitterroot	6570	4/28	44	17.8	12.0	15.9
Packsaddle Spring	Teton	8200	4/30	80	32.1	34.0	--
Phillips Bench	(Wy) Teton	8200	4/24	70	26.8	30.0	32.0
Pierce Ranger Sta.	Clearwater	3080	4/27	0	0.0	0.0	1.4*
Pine Creek Pass	Teton	6810	4/30	42	15.4	15.1	13.0
Poison Meadows	(Wy) Greys	8500	5/2	80	28.2	27.8	31.8
Pole Creek Ranger Sta.	Jarbridge	8360	4/30	106	40.0	28.4	24.4*
Putnam	Portneuf	7220	4/29	55	21.3	--	--
Road Creek	Boise	5380	5/4	2	0.7	0.0	--
Rock Flat Summit	Payette	5310	4/27	48	21.2	23.0	16.9
Saddle Mountain	(Mt) Bitterroot	7940	4/26	76	28.4	27.0	28.7
Sage Creek Saddle	Hayden	4080	5/1	24	10.4	9.1	17.6*
Salt River Summit	(Wy) Salt	7700	4/26	46	15.8	15.2	14.5
Savage Pass	Lochsa	6170	4/30	60	22.6	21.7	28.5*
Sawmill Canyon	Little Lost	7000	4/27	16	4.7	5.4	--
Sawtell Mountain	Henrys Fork	8720	5/1	106	39.5	51.7	38.5*
Schweitzer Basin	Pend Oreille	6090	4/29	95	42.2	69.5	--
Schweitzer Bowl	Pend Oreille	4800	4/29	48	20.3	36.3	23.7*
Schweitzer Ridge	Pend Oreille	6200	4/29	97	43.6	58.7	47.8*
Secesh Summit	Payette	6520	4/28	83	35.0	42.4	34.3*
Shanghai Summit	Clearwater	4570	4/27	48	16.8	13.2	21.2
Sheep Mountain	Willow	6570	4/30	26	9.5	12.8	4.9

(A) Aerial observation, water content estimated

(b) 1961-80, 20 year average

(e) Snow course data estimated from automated Snotel readings

(*) Estimated 1961-1980 20 year average

1/ Data readings as reported by automated Snotel system

SNOW

SNOW COURSE		Elevation	THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
NAME & DRAINAGE		Elevation					Average
Sherwin	St. Maries	3200	4/30	3	1.4	0.0	5.5*
Shoshone Basin	Salmon Falls	5810	4/30	16	6.2	--	1.8*
Skitwish Ridge	Coeur d'Alene	5110	4/30	64	29.8	32.1	--
Slag-a-melt Lake (Mt)	Big Hole	8750	5/1	89e	31.0e	33.5	28.7
Slug Creek	Blackfoot	7230	4/30	45	17.6	15.6	13.9*
Smith Creek	Kootenai	4800	4/30	76	33.9	51.0	45.7
Snow King Mtn. #3 (Wy)	Gros Ventre	7660	4/24	33	11.6	15.0	13.4
Soldier Ranger Sta.	Big Wood	5740	4/28	15	6.1	6.9	0.9*
Somsen Ranch	Willow Creek	6840	5/2	42	16.1	14.5	--
South Mountain	Jordan-Owyhee	6500	5/1	56	22.8	22.9	7.7*
Squaw Flat	Weiser	6240	4/28	59	23.8	32.8	21.6*
Squaw Meadow	Payette	5900	4/28	80	36.2	47.4	34.5*
State Line	Teton	6660	4/31	36	12.1	13.2	9.0
Stickney Mill	Big Lost	7430	5/7	20	8.0	14.8	5.7*
Strawberry Creek	Mink	5820	4/30	26	12.2	--	3.3*
Swede Peak	Little Wood	7640	5/7	39	14.5	26.5	15.8*
Targhee Pass	Henrys Fork	6980	5/1		14.3e	14.2	13.2*
Taylor Canyon (Nv)	Owyhee	6200	4/24	22	8.7	0.0	0.5
Teton Pass W.S. (Wy)	Teton	7740	4/24	68	28.4	38.2	28.4
Tex Creek	Willow	6650	5/1		9.8e	--	6.1*
Togwotee Pass	(Wy) Snake	9580	5/1	83	30.4	30.2	33.8
Toponce	Portneuf	6160	4/29	33	14.2	--	--
Trail Creek (Mt)	Beaverhead	7090	4/28	38	12.2	4.1	7.9
Trinity Mountain	Boise	7770	5/7	111	47.5	61.7	43.3*
Twelve Mile Creek (Mt)	Bitterroot	5600	4/24	34	14.6	8.2	16.7
Twin Lakes (Mt)	Bitterroot	6510	4/27	95	38.8	35.0	46.5
Upper Home Canyon	Montpelier	8560	4/30	76	29.3	27.6	23.8*
Upper Jack Creek (Nv)	Owyhee	7250	5/1	50e	19.4e	15.5	4.7
Valley View	Henrys Fork	6680	5/1	32	11.4	16.3	13.2*
Vienna Mine	Salmon	8960	5/7	99	39.3	47.6	38.8*
Webb Creek	Clearwater	4720	4/30	23	7.6	--	--
West Branch	Weiser	5560	5/1	59	23.2	24.0	--
Wet Creek Summit	Little Lost	7680	4/30	46	13.8	19.1	11.4*
Whiskey Creek (Mt)	Madison	6800	5/1	44	16.0	20.3	19.3
Whiskey Flat	Montpelier	6960	5/1		7.9e	7.8	4.2*
White Elephant	Henrys Fork	7710	5/1	66	23.9	32.0	25.7*
Willow Flat	Cub	6070	4/27	46	20.4	9.6	5.2*
Wilson Creek (Nv)	Salmon Falls	7500	4/30	67	28.7	--	6.2*

SNOTEL^{1/}

Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (inches)	Precipitation Water Year (Accumulation) (inches)
Atlanta Summit	Boise	5/1	35.5	40.2
Banner Summit	Payette	5/1	28.2	36.4
Base Camp	Upper Snake	5/1	14.2	23.7
Bear Basin	Little Salmon	5/1	23.1	33.6
Bear Canyon	Big Lost	5/1	18.4	23.2
Bear Creek	Jarbridge	5/1	42.5	40.2
Bear Mountain	Clark Fork	5/1	40.2	58.2
Bear Saddle	Mann Creek	5/1	29.3	35.1
Bennett Mountain	Canyon Creek	5/1	26.9	31.6
Big Creek Summit	Salmon	5/1	34.7	42.2
Big Sandy Opening	Green	5/1	NA	14.3
Blind Bull Summit	Green	5/1	26.6	23.7
Bostetter Ranger Station	Trapper	5/1	NA	27.6
Bunchgrass Meadow	Pend Oreille	5/1	28.4	41.8
Cottonwood Lake	Salt	5/1	23.1	33.2
Cozy Cove	Deadwood	5/1	11.0	31.3
Crab Creek	Camas-Beaver	5/1	16.7	26.3
Deadwood Summit	Deadwood	5/1	46.8	49.6
Dollarhide Summit	Big Wood	5/1	30.3	32.3
Elk Butte	Clearwater	5/1	38.8	48.6
Elkhart Park Guard Station	Green	4/30	13.9	17.2
Emigrant Summit	Bear	5/1	41.8	41.6
Franklin Basin	Cub	5/1	22.9	40.9
Galena	Big Wood	5/1	16.8	25.2

(A) Aerial observation, water content estimated

(b) 1961-80, 20 year average

(e) Snow course data estimated from automated Snotel readings

(*) Estimated 1961-1980 20 year average

1/ Data readings as reported by automated Snotel system

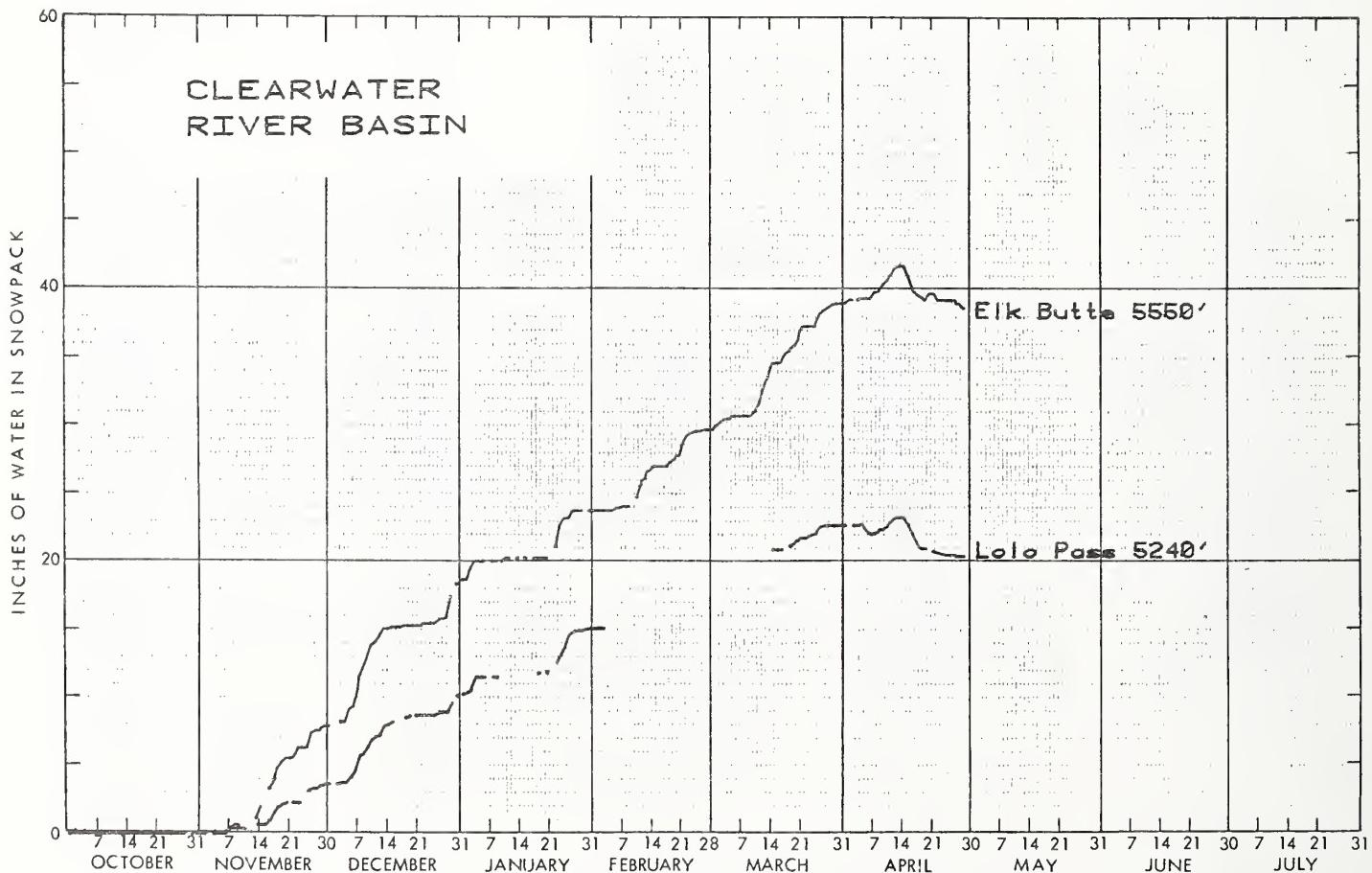
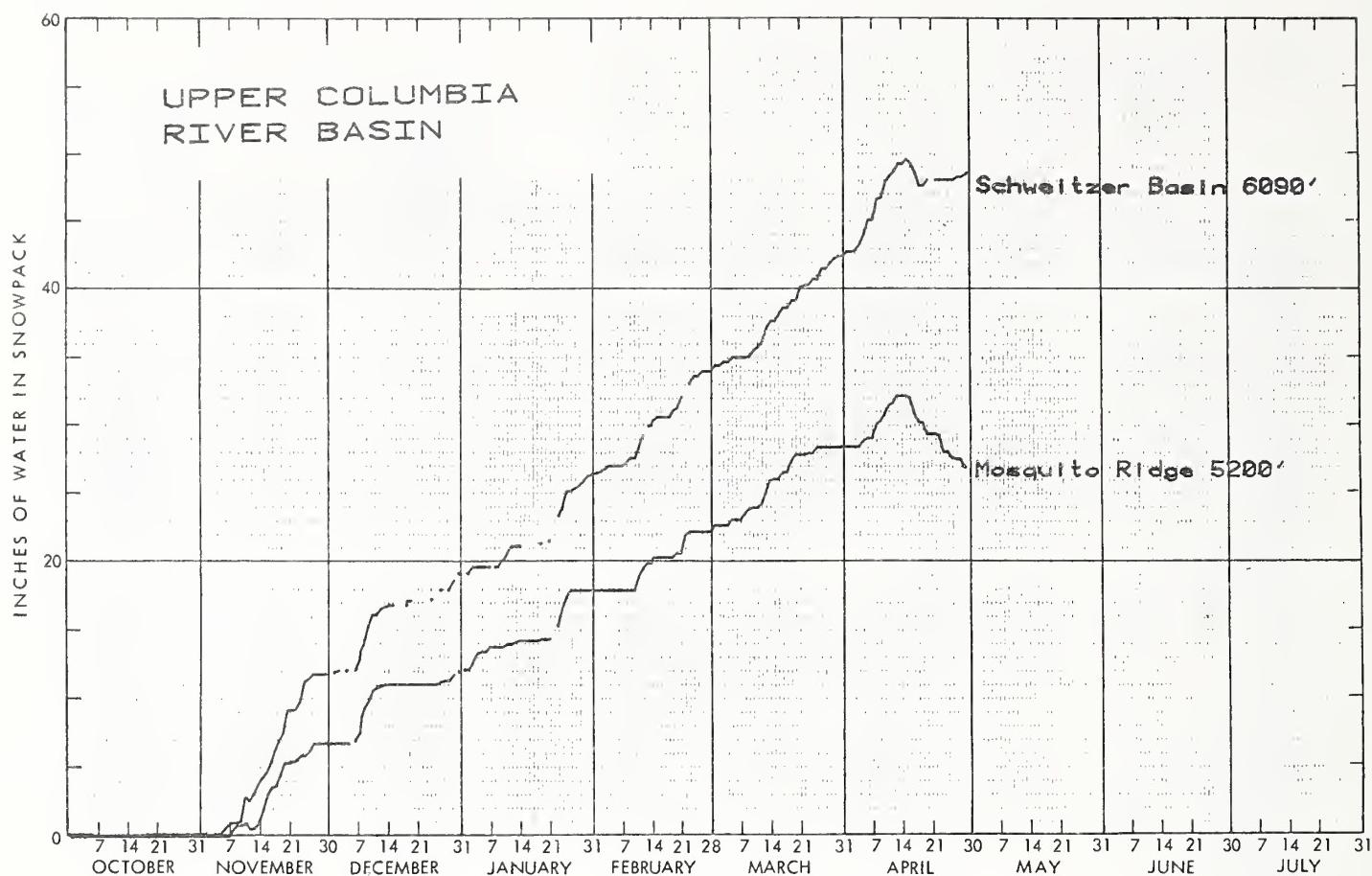
SNOTEL^{1/}

Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (inches)	Precipitation Water Year (Accumulation) (inches)
Galena Summit	Big Wood	5/1	NA	26.9
Garfield Ranger Station	Little Wood	5/1	5.6	17.9
Giveout	Montpelier	5/1	10.6	15.9
Goat Creek	Salmon Falls	5/1	40.1	40.9
Graham Guard Station	Boise	5/1	11.6	29.4
Grassy Lake	Upper Snake	5/1	NA	46.4
Gros Ventre Summit	Upper Snake	5/1	14.1	14.7
Hemlock Butte	Clearwater	5/1	48.1	57.2
Hilts Creek	Little Lost	5/1	15.3	16.4
Howell Canyon	Marsh Creek	5/1	41.9	44.8
Humboldt Gulch	Coeur d'Alene	5/1	2.9	36.5
Hyndman	Big Wood	5/1	10.3	19.8
Indian Creek	Green	5/1	30.6	31.3
Island Park	Henry's Fork	5/1	13.6	25.6
Jackson Peak	Boise	5/1	33.9	40.9
Kelly Ranger Station	Green	5/1	21.3	23.8
Lewis Lake Divide	Upper Snake	5/1	30.0	41.4
Lolo Pass	Lochsa	5/1	20.4	29.0
Lookout	Coeur d'Alene	5/1	NA	38.2
Loomis Park	Green	5/1	15.7	19.2
Lost Lake	Clearwater	5/1	58.6	60.7
Lost-Wood Divide	Big Lost	5/1	21.8	26.9
Magic Mountain	Rock Creek	5/1	35.0	42.4
Meadow Lake	Lemhi	5/1	NA	24.9
Mill Creek Summit	Salmon	5/1	21.5	25.3
Moonshine	Little Lost	5/1	13.8	19.8
Moores Creek Summit	Boise	5/1	40.2	43.5
Moose Creek	North Fork Salmon	4/24	20.6	25.4
Morgan Creek	Salmon	5/1	17.2	23.2
Mosquito Ridge	Coeur d'Alene	5/1	27.9	40.2
Mountain Meadows	Selway	5/1	33.9	40.2
Mud Flat	Owyhee	5/1	0.0	20.8
Oxford Spring	Malad	5/1	14.7	36.1
Phillips Bench	Upper Snake	5/1	29.8	32.4
Pole Creek Ranger Station	Salmon Falls	5/1	37.5	23.6
Prairie	Boise	5/1	0.0	23.1
Pullman	Palouse	5/1	NA	NA
Salt River Summit	Salt	5/1	14.6	23.4
Savage Pass	Lochsa	5/1	23.5	31.9
Schweitzer Basin	Pend Oreille	5/1	48.6	42.3
Secesh Summit	Payette	5/1	40.3	47.9
Shanghai Summit	Clearwater	5/1	21.4	42.1
Sheep Mountain	Willow	4/23	12.5	21.6
Sherwin	St. Maries	5/1	2.1	35.4
Slug Creek Divide	Blackfoot	5/1	22.0	27.2
Snider Basin	Green	5/1	11.5	14.7
Somson Ranch	Willow Creek	5/1	14.8	23.0
South Lind Experiment Sta.	Walla Walla	5/1	NA	8.4
South Mountain	Jordan-Owyhee	5/1	NA	30.5
Spring Creek Divide	Green	5/1	26.4	28.1
Squaw Flat	Weiser	5/1	24.3	35.3
Stickney Mill	Big Lost	5/1	9.0	13.2
Sunset	Coeur d'Alene	4/27	32.9	41.5
Swede Peak	Little Wood	5/1	15.3	22.9
Togwotee Pass	Upper Snake	5/1	26.5	32.7
Touchet #2	Touchet	5/1	NA	NA
Trinity Mountain	Boise	5/1	43.7	49.4
Two Ocean Plateau	Upper Snake	5/1	26.8	29.1
Vienna Mine	Salmon	5/1	38.6	35.8
West Branch	Weiser	5/1	26.4	39.3
White Elephant	Henry's Fork	5/1	26.9	37.0
Wildhorse Divide	Portneuf	5/1	NA	38.8
Willow Creek	Greys	5/1	42.6	46.5

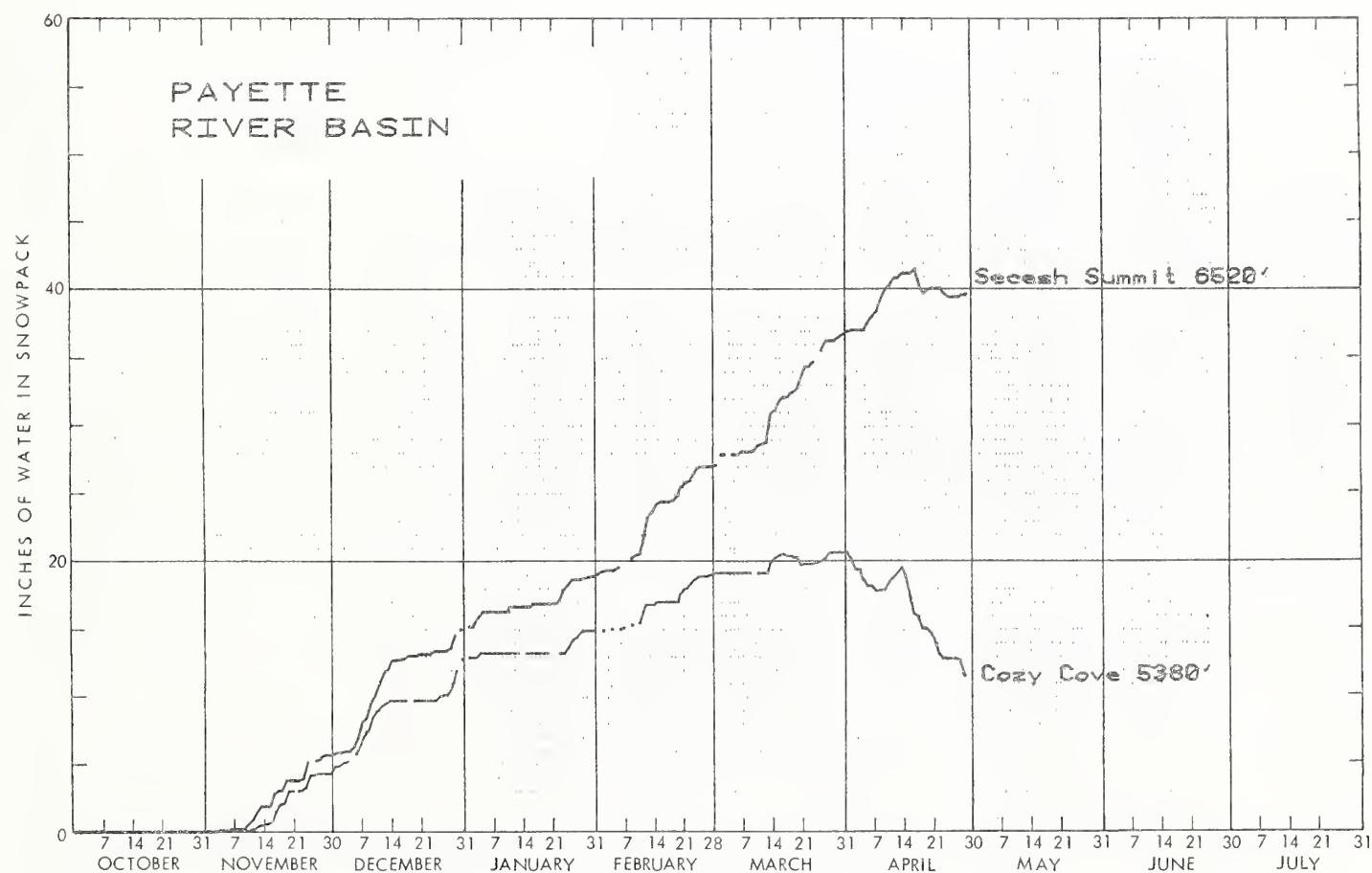
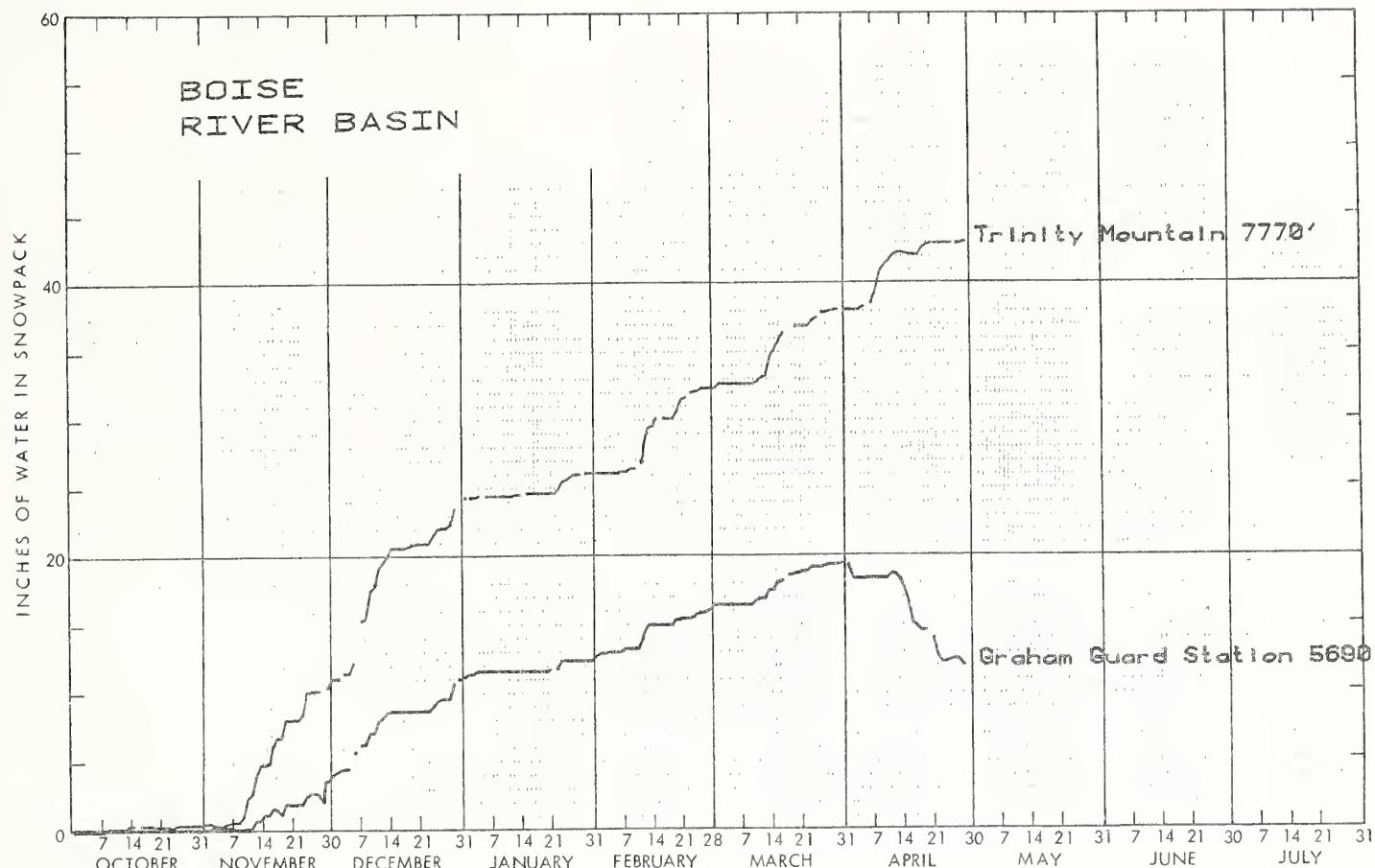
^{1/} Data readings as reported by automated Snotel system.

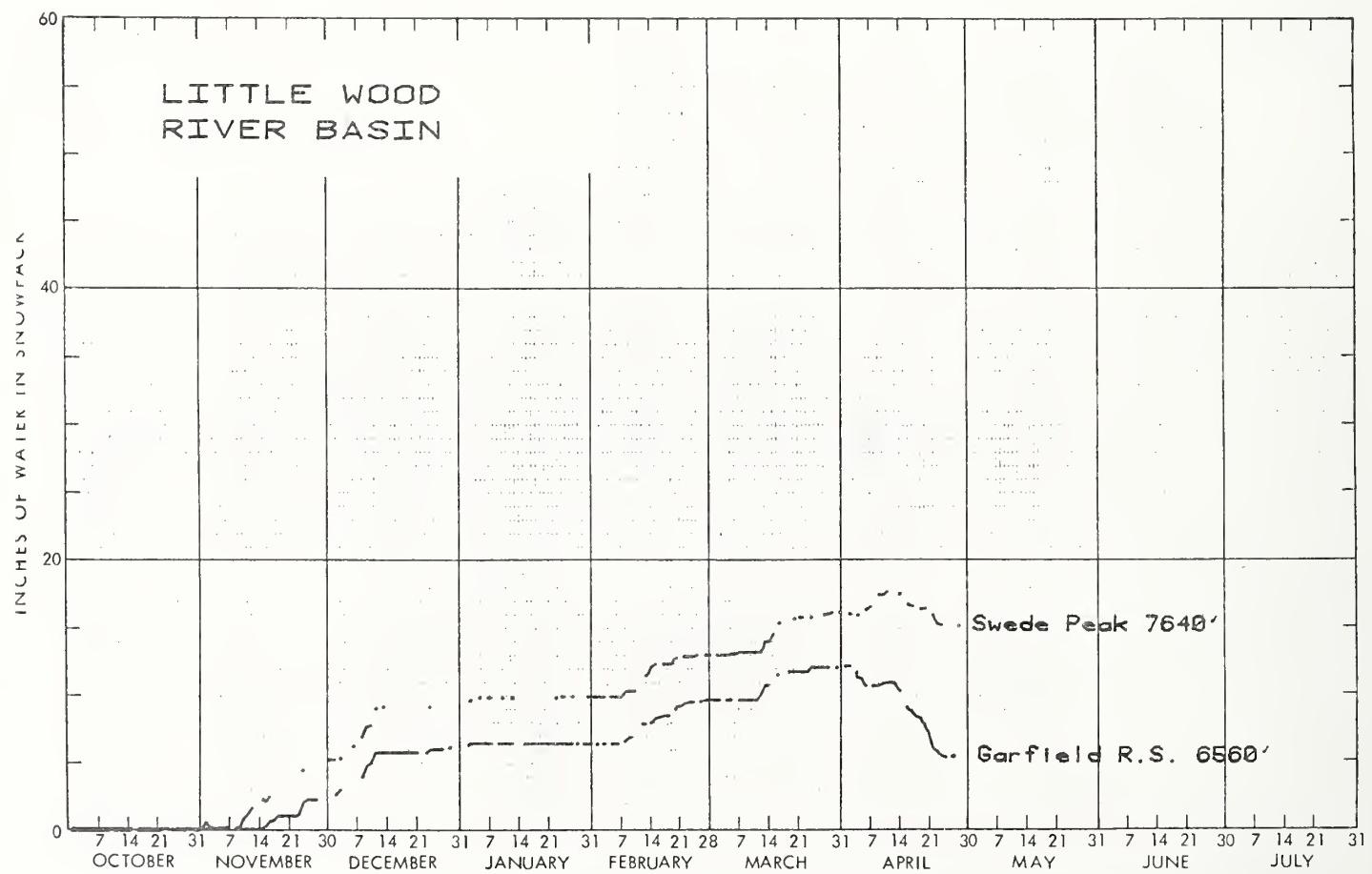
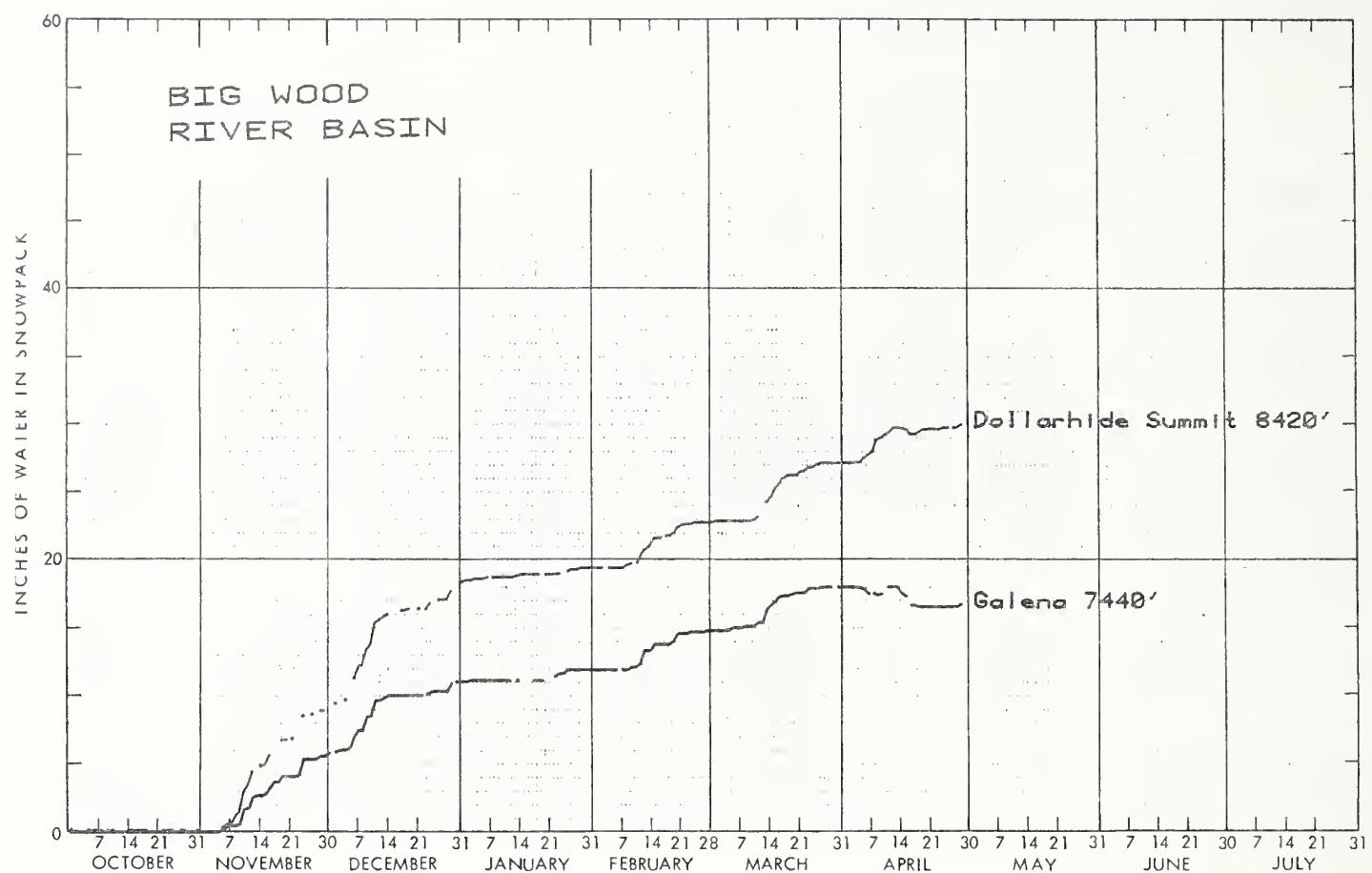
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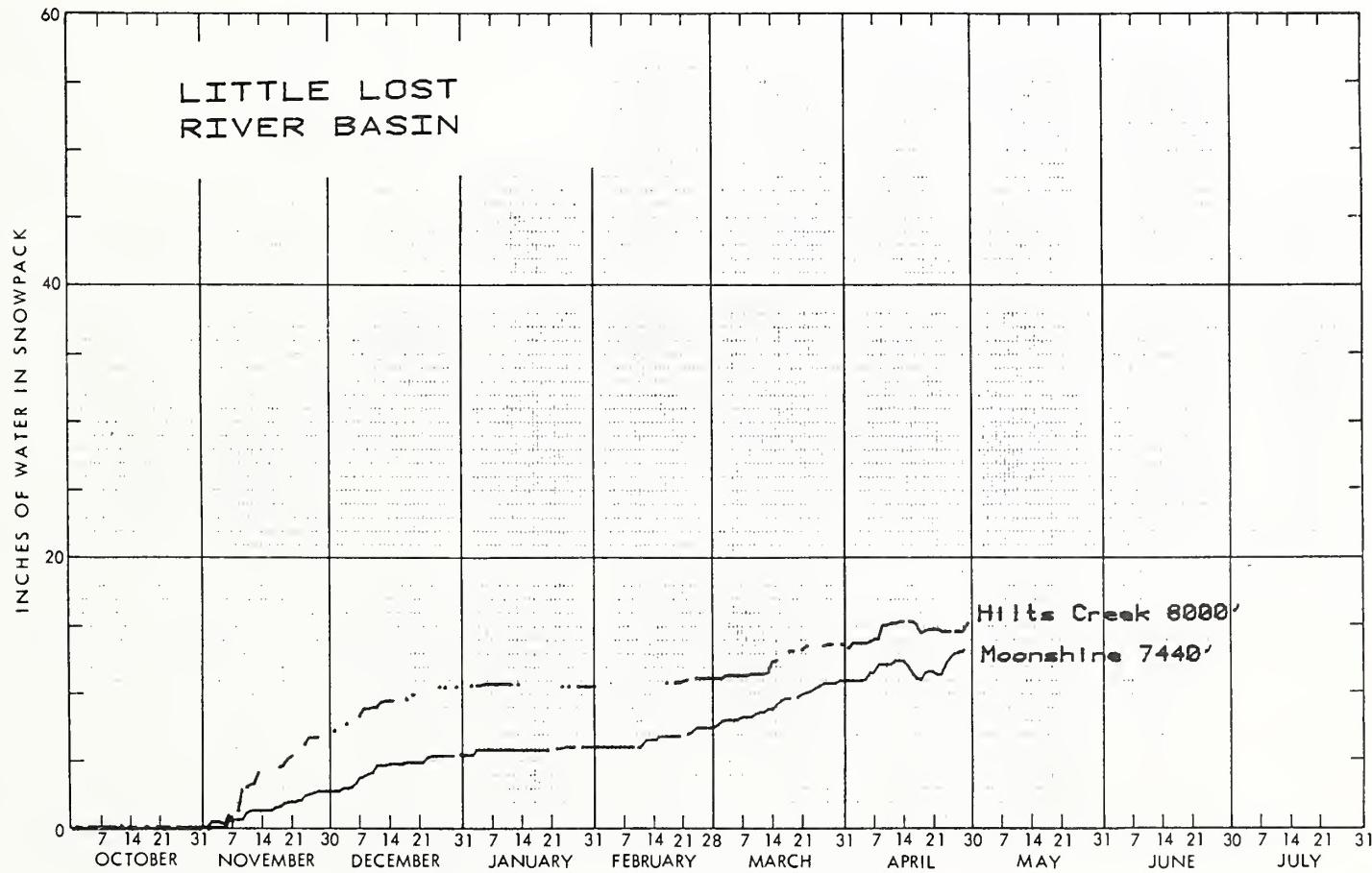
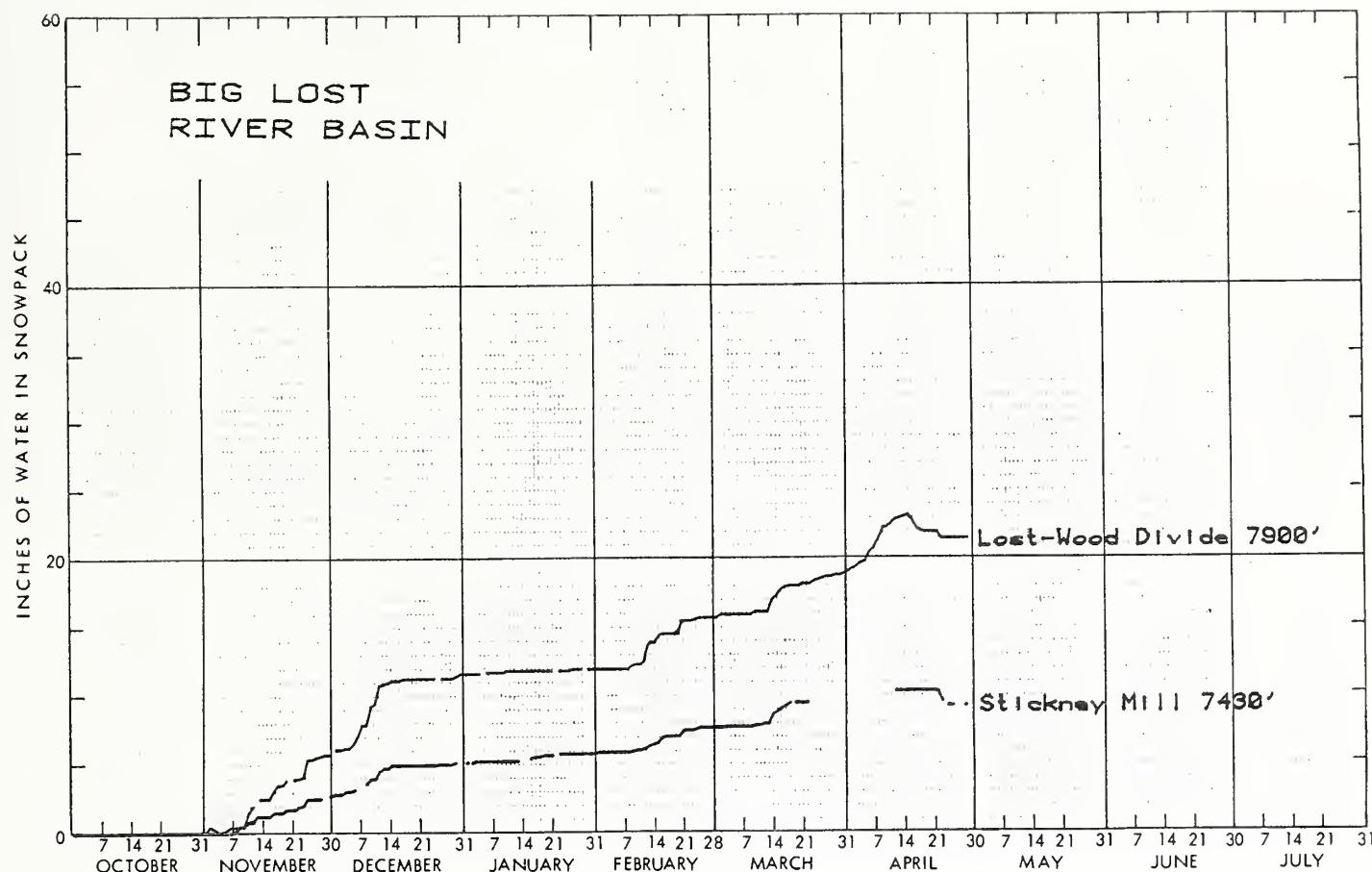


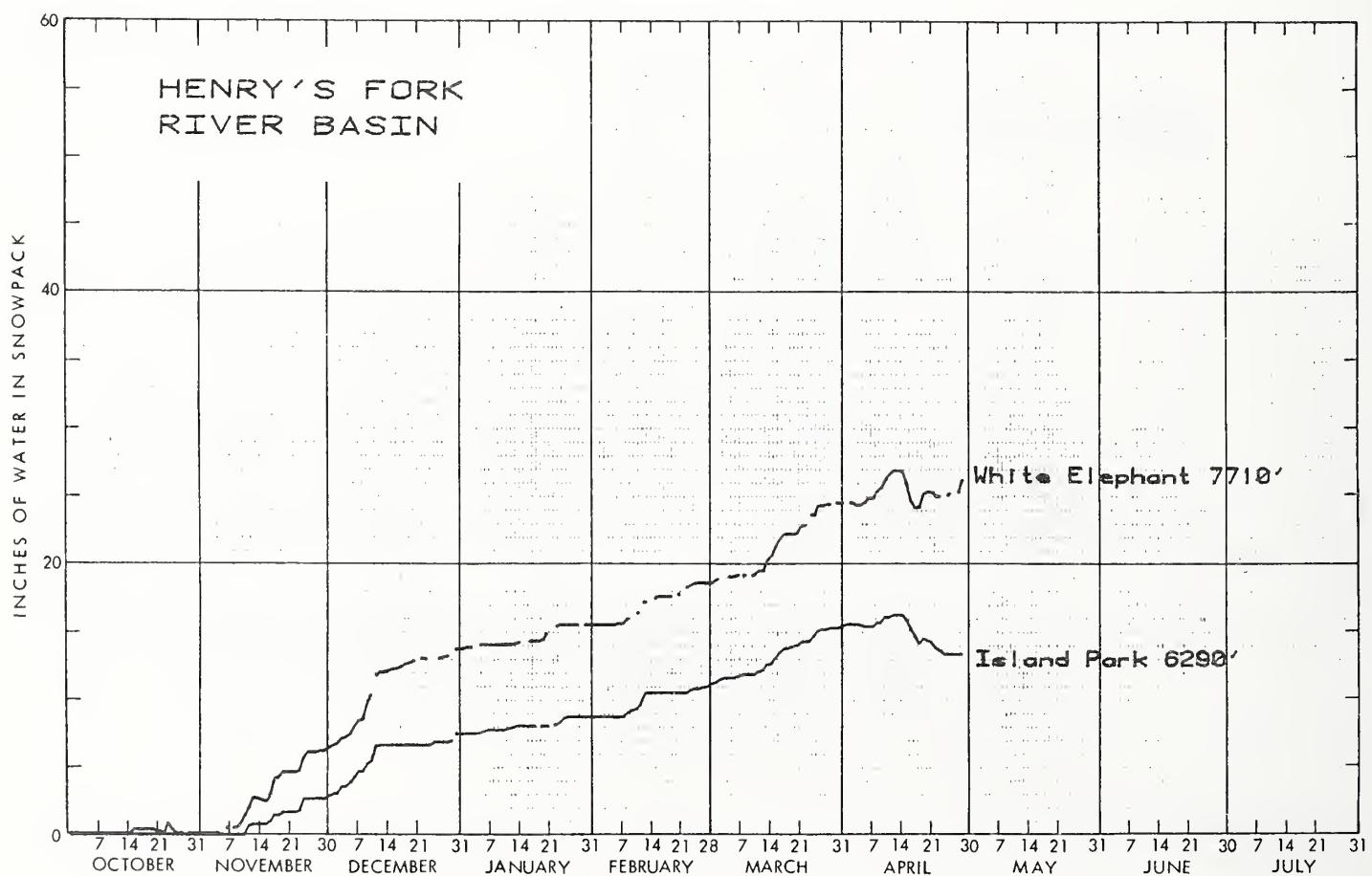
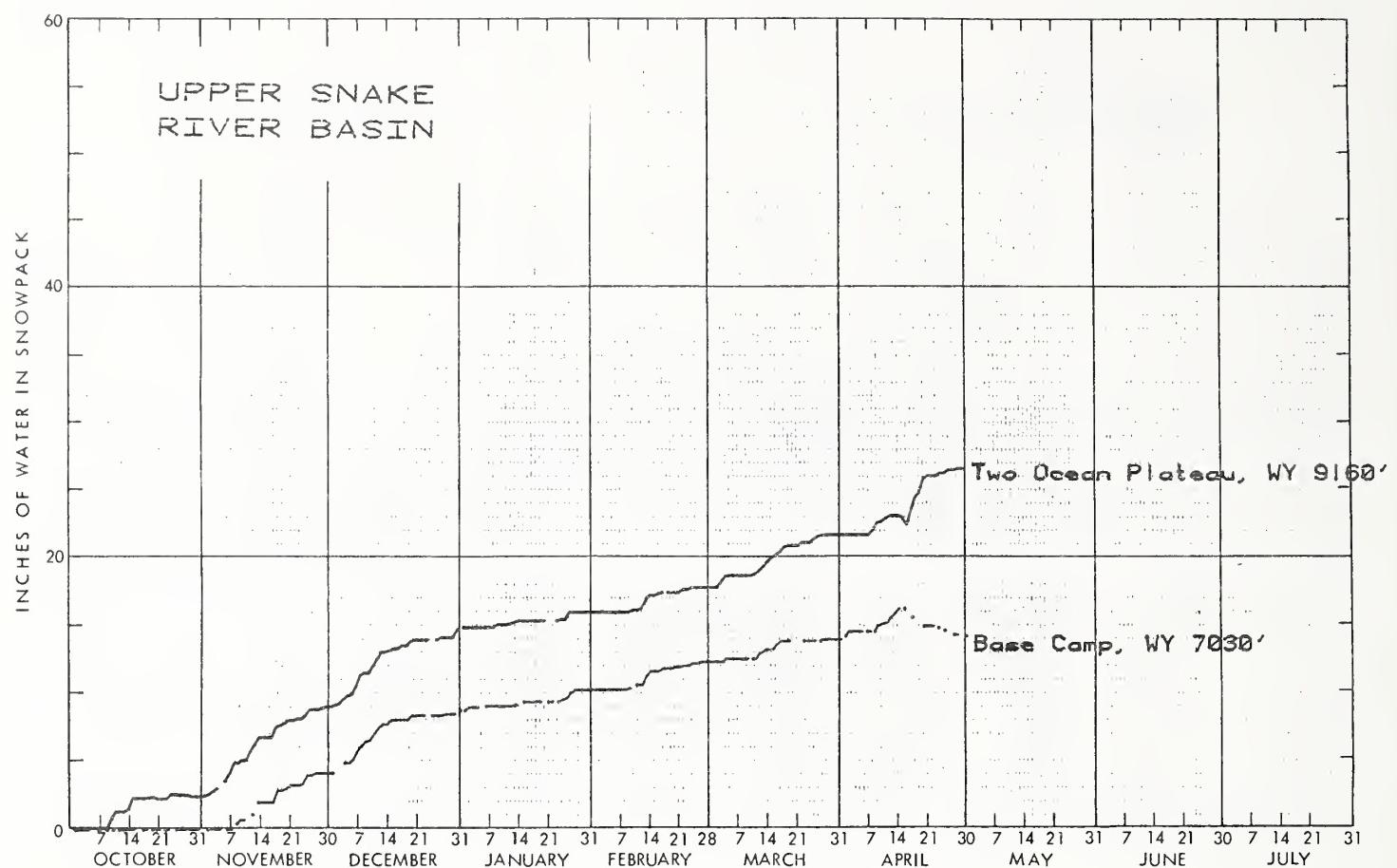
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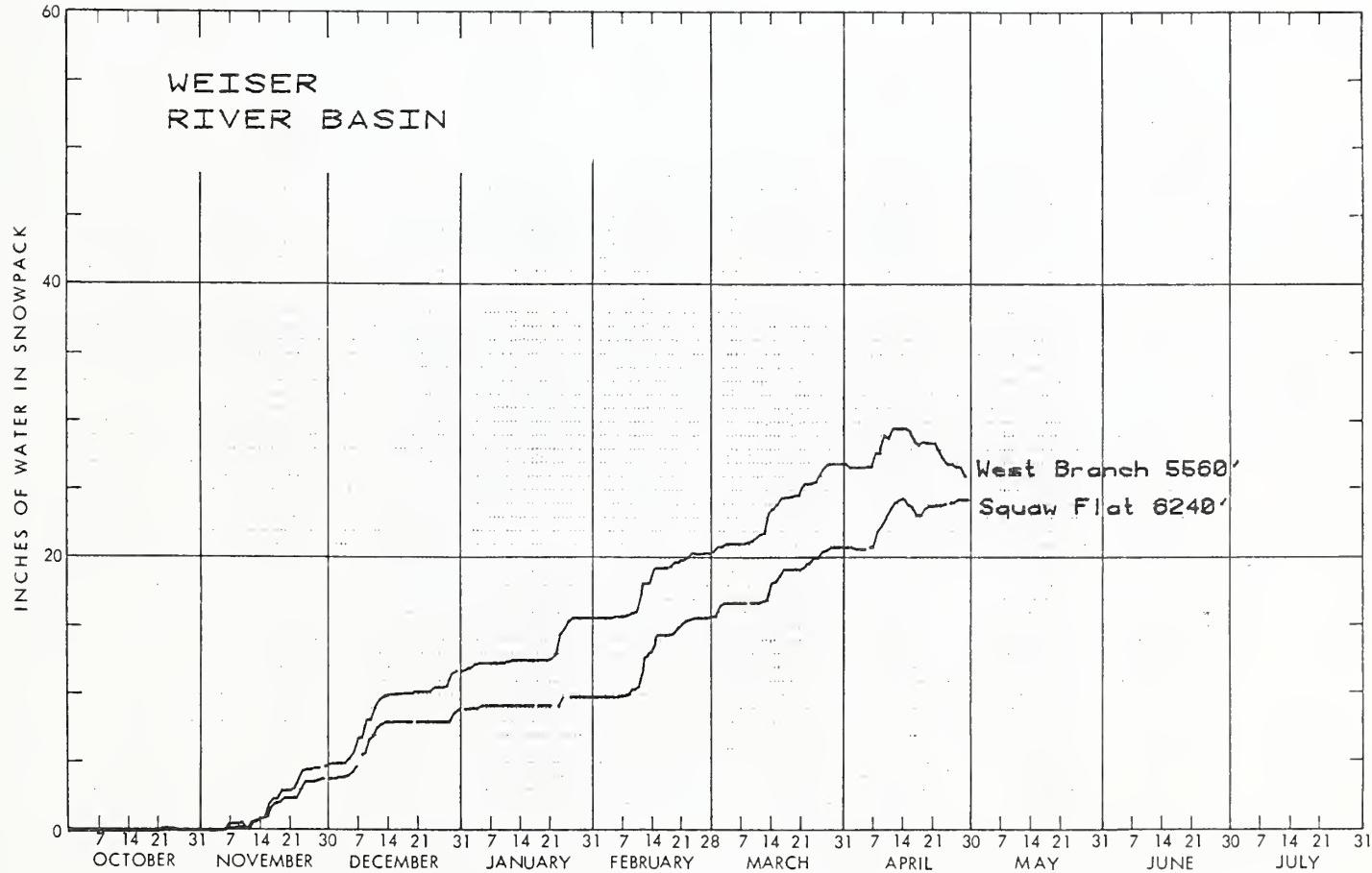
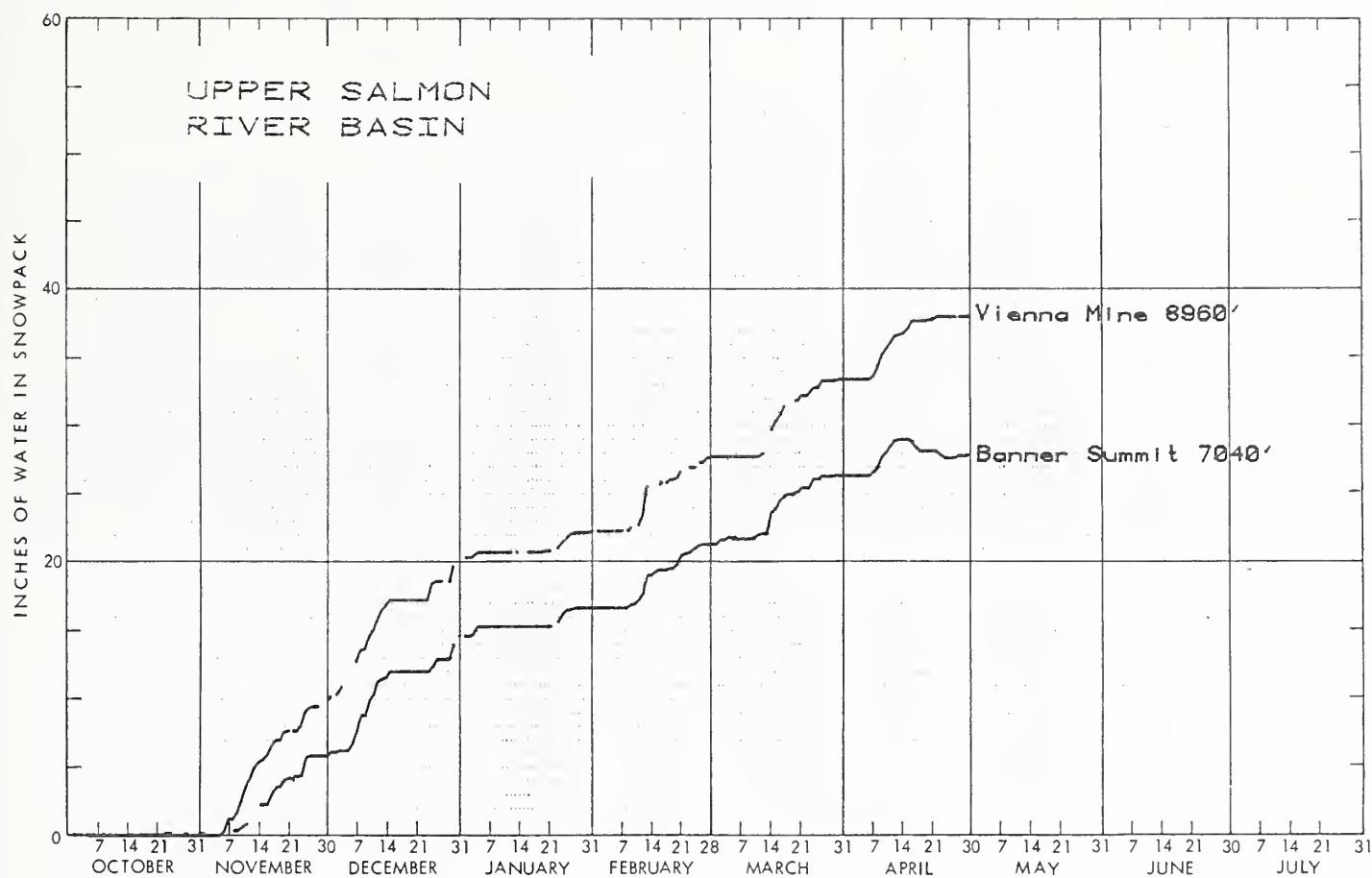


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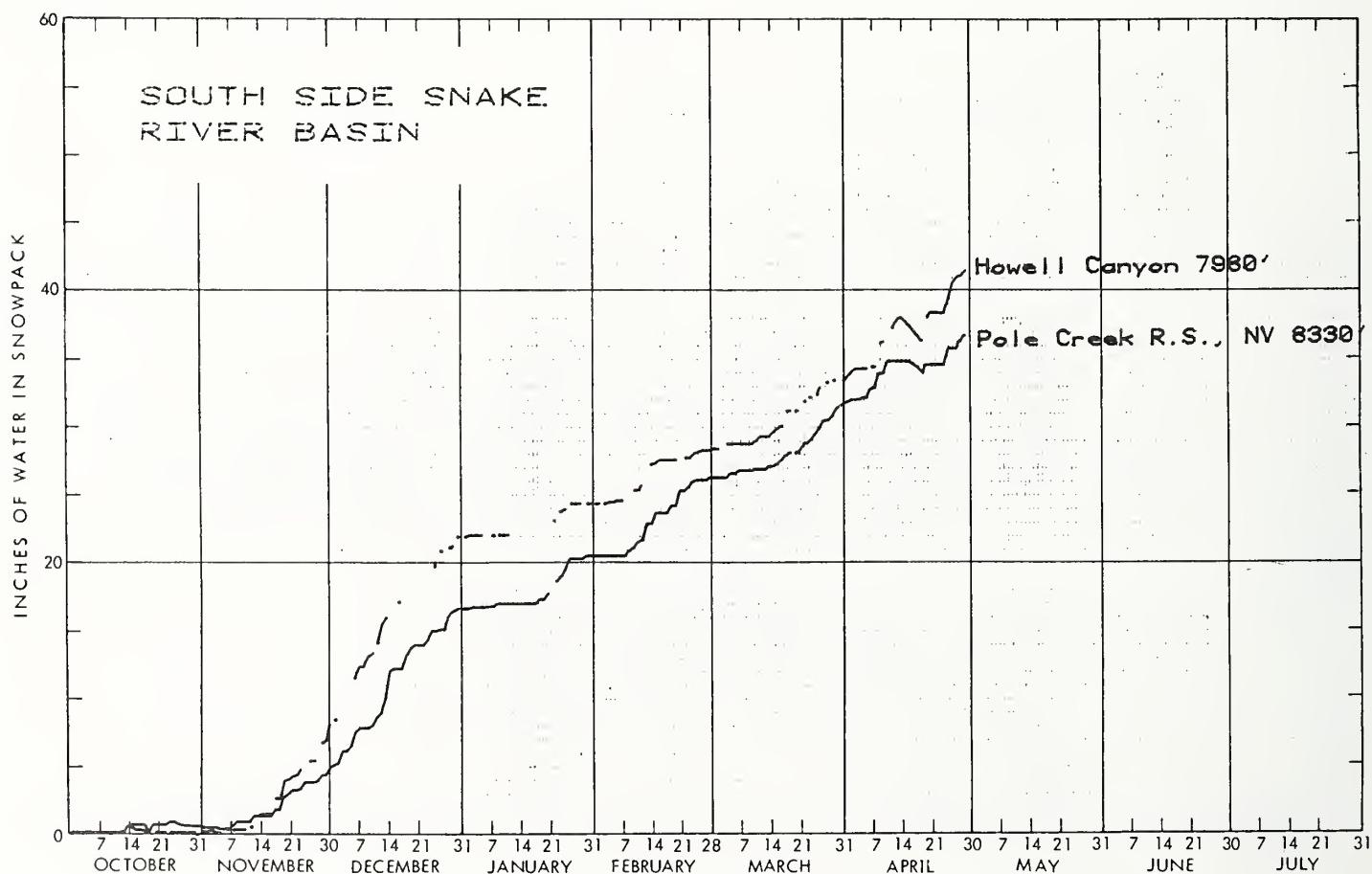
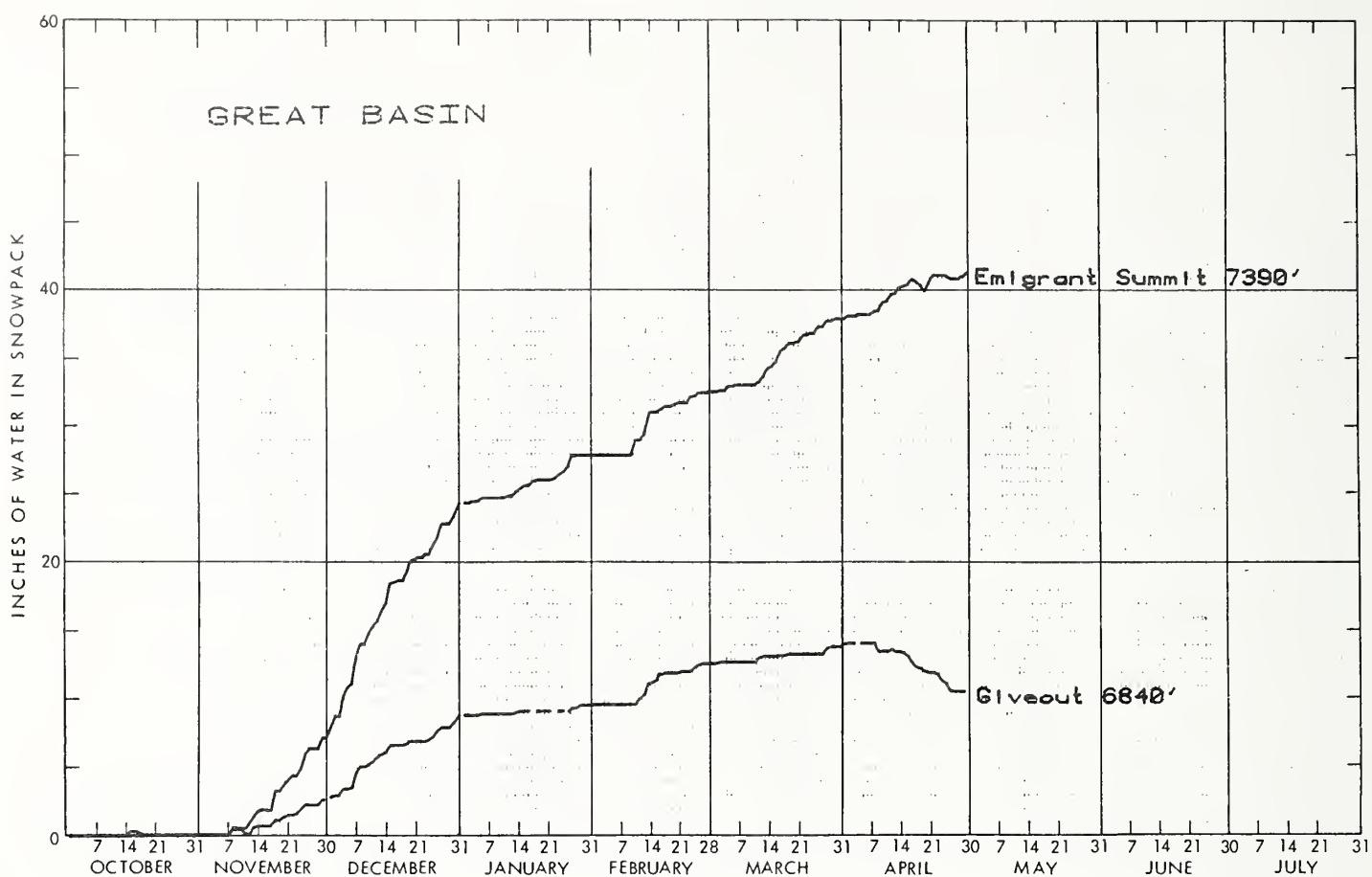




WSFB-X13C



WSFB-X13C



GOVERNMENT AGENCIES

States

Idaho Department of Water Resources
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of Interior
Bureau of Reclamation
Water Resources Division, Geological Survey
Shoshone-Bannock Tribal Council

PUBLIC UTILITIES

Washington Water Power Company
Idaho Power Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

PRIVATE ORGANIZATIONS

FMC Corporation
Cyprus Mining Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

—
“The Conservation of Water begins
with the Snow Survey”

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